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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/624,798	07/24/2000	Paul C Coffin	10001664-1	6517
22879	7590	05/05/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400				WATKO, JULIE ANNE
ART UNIT		PAPER NUMBER		
				2653

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/624,798	COFFIN ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Julie Anne Watko	2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## **Office Action Summary**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 22 October 2004 and 23 February 2005.

2a)  This action is FINAL.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-6 and 10-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-6 and 10-20 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 07/24/2000 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a))

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 02/23/2005.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date.       .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other:       .

**DETAILED ACTION**

1. In view of the Supplemental Appeal Brief filed on October 22, 2004, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-2, 4-6, 10-11, 13-17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Twigg (US Pat. No. 5227954).

As recited in independent claim 1, Twigg shows a reconfigurable module for use in a data storage system, comprising: a frame, said frame having two plates (22L and 22R) positioned in generally parallel, spaced-apart relation (see Fig. 2, rotated), said plates of said frame having a plurality of sets of mounting locations (42, 43 and 44) provided thereon so that said frame defines a first component configuration and a second component configuration (“configurations of these drives as mounted are shown in FIG. 5A ... and FIG. 5B”, see col. 4, lines 23-25);

the first component configuration (see Fig. 5A) comprising: a first disk drive 50 mounted to a first set 42 of the plurality of sets of mounting locations provided on said frame so that said first disk drive 50 is located at a first position within said frame; and a second disk drive mounted to a second set 44 of the plurality of sets of mounting locations provided on said frame so that said second disk drive 51 is located at a second position within said frame, said first and second disk drives together occupying a volumetric space within said frame, wherein said first and second disk drives (50 and 51) are located substantially between the plates (22L and 22R) of said frame when said frame is in the first component configuration;

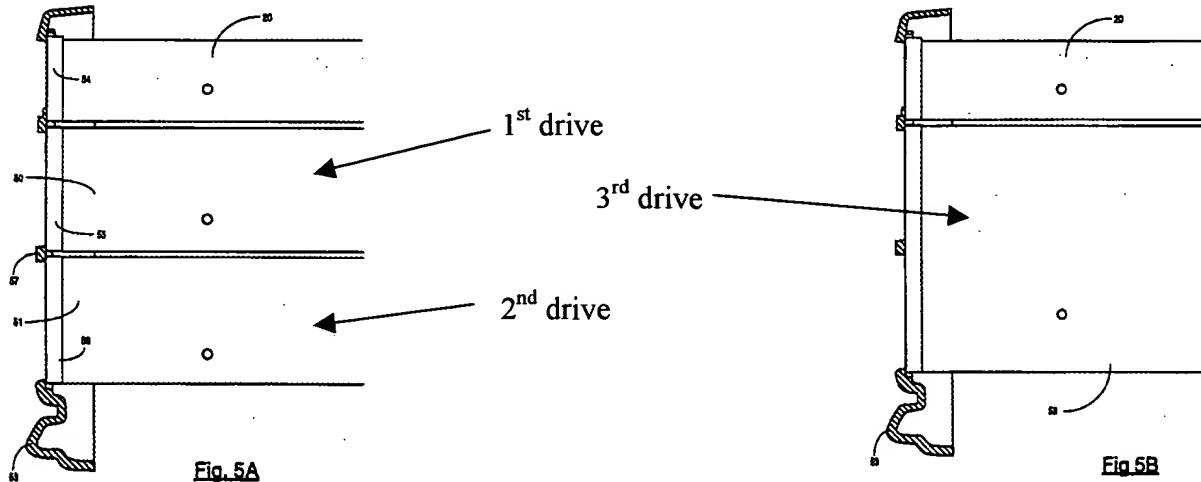
the second component configuration (see Fig. 5B) comprising a third disk drive 52 mounted to a third set 43 of the plurality of sets of mounting locations provided on said frame, said third disk drive 52 occupying substantially the same volumetric space within said frame as is occupied by said first and second disk drives (50 and 51) in said first component configuration

(compare Fig. 5B to Fig. 5A), wherein said third disk drive 52 is located substantially between the plates (22L and 22R) of said frame when said frame is in the second component configuration.

**Twigg Fig. 5A  
1<sup>st</sup> Configuration**

**substantially the same  
volumetric space**

**Twigg Fig. 5B  
2<sup>nd</sup> Configuration**



Twigg is silent regarding whether said plates (22L and 22R) are a lower plate and an upper plate. It is noted by the Examiner that the Twigg computer could be rotated as a whole by the user, and would be fully operational without any structural modification. Thus, the orientation of the prior art apparatus is treated as a statement of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In this case, the prior art apparatus could be rotated by the user into an orientation in which the left and right plates become upper and lower plates. Thus, the intended use limitation is met by Twigg.

As recited in claim 1, Twigg is silent regarding whether said “disk drive” receives a cartridge, such that the first, second and third devices are cartridge receiving devices, and such that the reconfigurable module is a cartridge processing module.

It is clear from Applicant’s specification, page 8, lines 3-29, that Applicant uses the term “cartridge receiving devices” to include “disk or tape drive units”.

Official notice is taken of the fact that it was known in the art at the time the invention was made that the term “disk drive”, as used by Twigg, is a broad term which refers to both cartridge-receiving disk drives and non-cartridge-receiving disk drives.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the disk drives of Twigg with cartridge-receiving disk drives. The rationale is as follows: one of ordinary skill in the art would have been motivated to replace the disk drives with cartridge-receiving disk drives in order to read commercially available software that happens to come packaged in a cartridge-protected disk, and to protect recording media from dust and moisture as is notoriously well known in the art.

As recited in independent claim 10, in addition to the above teachings, Twigg shows that the second position is located adjacent (see Fig. 5A) the first position so that the second disk drive 51 is located alongside (see teachings above and below regarding statements of intended use) the first disk drive 50, said third disk drive 52 in said second component configuration (see Fig. 5B) substantially replacing said first and second disk drives (50 and 51) so that a volumetric space occupied by said first and second disk drives 50 and 51 in said first component configuration is substantially occupied by said third disk drive 52 in said second component configuration (compare Fig. 5B to Fig. 5A) and vice-versa (compare Fig. 5A to Fig. 5B).

It is noted by the Examiner that the Twigg computer could be rotated as a whole by the user, and would be fully operational without any structural modification. Thus, the limitation “alongside” is treated as a statement of intended use. Because the Twigg apparatus could be used in an orientation such that the drives 50 and 51 are “alongside” one another, this limitation is met by the apparatus disclosed in the Twigg reference.

Regarding independent claim 14, in addition to the above teachings: It is noted by the Examiner that the language of this claim invokes the 6<sup>th</sup> paragraph of 35 U.S.C. § 112. It is further noted by the Examiner that the disk drives of Twigg are art-recognized equivalents of Applicant’s “disk or tape drive units”.

As recited in independent claim 20, in addition to the above teachings, Twigg shows a method, comprising providing a frame (see Fig. 2) having plates (22L and 22R), said plates having a plurality of sets of mounting locations (42, 43 and 44, for example) thereon; defining a first component configuration by mounting (“42 and 44 are used to mount half-high drives”, see col. 4, lines 21-22) a first disk drive 50 to a first set 42 of the plurality of sets of mounting locations provided on said frame and by mounting a second disk drive 51 to a second set 44 of the plurality of sets of mounting locations provided on said frame so that the second disk drive 51 is located adjacent the first disk drive 50, wherein said first and second disk drives (50 and 51) are located substantially between the plates (22L and 22R) of said frame when said frame is in the first component configuration (see Fig. 5A);

or, in the alternative, defining a second component configuration (see Fig. 5B) by mounting (“43 is used to mount a full-high drive”, see col. 4, lines 22-23) a third disk drive 52 to a third set 43 of the plurality of sets of mounting locations provided on said frame.

As recited in claim 20, Twigg is silent regarding the plates (22L and 22R) being the lower plate and the upper plate.

Official notice is taken of the fact that it was known in the art at the time the invention was made to rotate a computer to any convenient orientation to conform to the needs dictated by the user's available workspace and aesthetic preferences.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to rotate the computer of Twigg. The rationale is as follows: one of ordinary skill in the art would have been motivated to rotate the computer in order to provide a plurality of drive docks at a uniform height chosen for ergonomic safety so as to avoid injuries from repeatedly straining the user's body to reach up or down, or to look up or down as is notoriously well known in the art.

Due to similarities in claimed subject matter, similar dependent claims are treated together.

As recited in claims 2, 11 and 17, Twigg shows that 50 (rotated) is a half-width read/write device ("two half-high drives 50 and 51", see col. 4, line 25).

As recited in claims 4, 13 and 19, Twigg shows that 52 (rotated) is a full-width cartridge read/write device ("single full-high drive 52", see col. 4, lines 26-27).

See arguments above for claim 1 regarding the intended use of the half-height and full-height drives as half-width and full-width drives.

As recited in claims 5-6 and 15 and 16: See teachings above for claim 10 regarding "adjacent" and "alongside".

5. Claims 3, 12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Twigg (US Pat. No. 5227954) in view of Pitz et al (US Pat. No. 6240058 B1).

Twigg shows a reconfigurable module as described above for claims 1-2, 4-6, 10-11, 13-17 and 19-20.

Twigg is silent regarding whether a second device is a storage magazine.

Pitz et al teach disk magazines having the same outside dimensions as disk drives, such that “a disk magazine can be replaced in a modular fashion with a disk drive magazine or vice versa” (see col. 2, lines 23-25) so as “to adapt the disk changing unit in a optimum manner to the respective user requirements” (see col. 2, lines 33-35), and teaches that “for many applications it may be necessary for the disk changing unit to have fewer disk magazines and instead have more disk drives or have fewer disk drives and more magazines” (see col. 1, lines 64-67). Pitz et al further teach that “a plurality of disk magazines and only a low number of disk drives can be provided if the disk changing unit is primarily used for data file storage, which requires that the storage capacity is kept high” (see col. 2, lines 35-38). Moreover, Pitz et al teach that a “disk changing unit thus can be fitted out completely with modules and can be configured for the most part by the user him-/herself” (see col. 2, lines 44-46), and that features “can be used not only in the respectively named combinations, but also in other combinations or by themselves” (see col. 4, lines 35-38). Additionally, Pitz et al disclose “a guide frame that is secured rigidly to the housing” (see col. 3, lines 21-24), analogous to the frame of Twigg, including the two plates.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace Twigg’s drive 51 with a magazine of identical shape and size as taught by Pitz et al, such that the first configuration includes a second device which is a storage magazine.

The rationale is as follows: one of ordinary skill in the art would have been motivated to replace the drive with the magazine in order to meet user requirements by increasing data storage at the expense of data retrieval speed as taught by Pitz et al (“to adapt the disk changing unit in a optimum manner to the respective user requirements”, see col. 2, lines 33-35; see also col. 2, lines 35-38, “a plurality of disk magazines and only a low number of disk drives can be provided if the disk changing unit is primarily used for data file storage, which requires that the storage capacity is kept high”).

Official notice is taken of the fact that it was known in the art at the time the invention was made that “disk magazine”, as used by Pitz et al, is a broad term which refers to both cartridge-receiving disk magazines and non-cartridge-receiving disk magazines.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace said disk magazines of Pitz et al with disk magazines that are cartridge receiving devices. The rationale is as follows: one of ordinary skill in the art would have been motivated to protect disc media from dust and moisture during storage, and to store commercially available software that happens to come packaged in a cartridge-protected disk as is notoriously well known in the art.

#### *Response to Arguments*

6. Applicant's arguments with respect to claims 1-6 and 10-20 have been considered but are moot in view of the new ground(s) of rejection.

Although Applicant's arguments were not persuasive, the Examiner acknowledges the poor image quality of references relied upon in the rejections mailed July 22, 2004. In the interest of establishing a clear record of prosecution, the Examiner has relied upon new evidence.

The Examiner apologizes for any inconvenience and misunderstanding resulting from poor reproduction quality.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cartridge-receiving disk drive housings and non-cartridge-receiving disk drive housings are either the same art or analogous art insofar as innovations applicable to one type of drive are applicable to the other type. See, e.g., Iwata et al (US Pat. No. 5524104), which teaches that a "disk drive arrangement of the second embodiment is substantially of the same construction as the above described first embodiment, except that, instead of a the magnetic drive 4 being a hard disk drive, a floppy disk drive 12 is provided" (see Iwata et al col. 3, lines 6-10; see also Figs. 1B and 2B, for example).

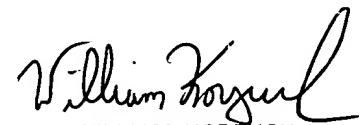
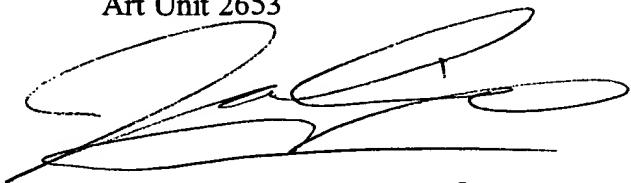
8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Anne Watko whose telephone number is (571) 272-7597. The examiner can normally be reached on Tues. & Thurs. until 9PM, Wed. & Fri. until 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Julie Anne Watko  
Primary Examiner  
Art Unit 2653

April 29, 2005  
JAW



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SUPERVISORY PATENT EXAMINER  
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